

## **Methodology used to determine location of closures for Alternative 6**

The areas selected for closure to bottom contact gear (BCG) under Alternative 6 were determined based primarily on qualitative criteria although we considered quantitative information on bottom trawl and longline fishing intensity throughout Alaska and the intensity of crab fisheries by statistical area in the Bering Sea. Also considered were survey and observer data on the distribution of living substrates, although it was assumed in most cases that protection to living substrates would occur if BCG closures occurred over a cross section of habitat types dispersed geographically.

We tried to accommodate the desire to cover a cross section of habitat types by having the closures extend from the 1000 m contour shoreward to the beach and geographically dispersing the closures throughout the larger areas. In some cases general knowledge of geology/habitat types was considered. For example in the Central Gulf we dispersed the closures over sections of the seafloor that were formerly glaciated such as in the vicinity of Portlock bank and non-glaciated areas such as near Albatross Bank. We also considered the location of specific habitat features. For example, the BCG closure in the EG southeast of Yakutat was strategically placed because it incorporates the northeast corner of the Fairweather Grounds yet does not include the entire Fairweather Grounds. The Fairweather Grounds are an important fishing area with sensitive habitat (corals). In the Central and Eastern Gulf we incorporated the seamounts which are lightly fished yet are known to have an abundance of coral and sponge habitat.

Strong consideration was given to the location of current partial closures (e.g., seasonal, species specific, or gear specific areas). Many of the BCG closures were placed adjacent to and within some of the partial closures. In most cases we started with complete statistical areas as BCG closures then adjusted the boundaries to accommodate the objective of having a mix of fished and not fished areas and the constraint of approximately 20% closure in a specific area. In some cases statistical areas were split perpendicular to the depth contours and the split out section moved to another location to support this objective. For example in the vicinity of Portlock Bank the original location of the BCG closure covered most of the major bottom trawl locations on the Bank. We split the closure and moved the split out section to an area to the west with less fishing intensity. A similar process was done in the vicinity of Albatross Bank.

The “cod corridor” region of the Bering Sea was specifically avoided for a BCG closure. This is an area of intense fishing and the substrate type in this region is similar other lightly fished areas. A considerable portion of the BCG closures in the Bering Sea were placed in existing trawl closure areas. We considered the location of existing crab fisheries in the placement of the BCG closures within these closure areas. However the resolution of the crab fishery data available to us was by statistical area. In many cases we tried to avoid having the BCG closures in the immediate vicinity of fishing ports, although in some cases this was difficult to avoid, especially in the Aleutian Islands.